$$LCL = \bar{x} - t_{.975}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.975}$ is the t statistic for a 97.5% one-tailed confidence interval with n-1 degrees of freedom (from Appendix A).

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to commercial clothes washers; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: The modified energy factor (MEF) in cubic feet per kilowatt hour per cycle (cu ft/kWh/cycle) and the water factor in gallons per cubic feet per cycle (gal/cu ft/cycle) for units manufactured on or after January 8, 2013.

[76 FR 12451, Mar. 7, 2011; 76 FR 24777, May 2, 2011]

EFFECTIVE DATE NOTE: At 79 FR 71630, Dec. 3, 2014, § 429.46 was amended by revising paragraphs (a)(2)(i) introductory text, (a)(2)(ii) introductory text, and (b)(2), effective Jan. 2, 2015. For the convenience of the user, the revised text is set forth as follows:

§ 429.46 Commercial clothes washers.

(a) * * *

(2) * * *

(i) Any represented value of the water factor or other measure of energy or water consumption of a basic model for which consumers would favor lower values shall be greater than or equal to the higher of:

* * * * *

(ii) Any represented value of the modified energy factor or other measure of energy or water consumption of a basic model for which consumers would favor higher values shall be greater than or equal to the higher of:

* * * * *

(b) * * *

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information:

(i) If testing was conducted using Appendix J1 to subpart B of part 430 of this chapter: The modified energy factor (MEF) in cubic feet per kilowatt hour per cycle (cu ft/kWh/cycle); and the water factor (WF) in gallons per cubic feet per cycle (gal/cu ft/cycle);

(ii) If testing was conducted using Appendix J2 to subpart B of part 430 of this chapter: The modified energy factor (MEF_{J2}) in cu ft/kWh/cycle and the integrated water factor (IWF) in gal/cu ft/cycle.

§ 429.47 Distribution transformers.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to distribution transformers; and

(2) For each basic model of distribution transformer, efficiency must be determined either by testing, in accordance with § 431.193 and the provisions of this section, or by application of an AEDM that meets the requirements of § 429.70 and the provisions of this section.

(i) For each basic model selected for testing:

(A) If the manufacturer produces five or fewer units of a basic model over 6 months, each unit must be tested. A manufacturer may not use a basic model with a sample size of fewer than five units to substantiate an AEDM pursuant to § 429.70.

(B) If the manufacturer produces more than five units over 6 months, a sample of at least five units must be selected and tested.

(ii) Any represented value of efficiency of a basic model must satisfy the condition:

$$RE \leq \frac{100}{1 + \left(\frac{100 - \bar{x}}{\bar{x}}\right)\left(\frac{\sqrt{n}}{\sqrt{n} + .08}\right)}$$

where $\bar{x}$ is the average efficiency of the sample.

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to distribution transformers except that required information in paragraph (b) of this section may be reported by kVA grouping instead of by basic model and paragraph (b)(6) of this section does not apply; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: For the most and least efficient basic models within each ''kVA grouping'' for which part 431 prescribes an efficiency standard, the kVA rating, the insulation type (*i.e.*, low-voltage dry-type, medium-voltage dry-type or liquid-immersed), the number of phases (*i.e.*, single-phase or three-phase), and the basic impulse insulation level (BIL) group rating (for medium-voltage dry-types).

(c) *Alternative methods for determining efficiency or energy use* for distribution transformers can be found in § 429.70 of this subpart.

(d) *Kilovolt ampere (kVA) grouping.* As used in this section, a ''kVA grouping'' is a group of basic models which all have the same kVA rating, have the same insulation type (*i.e.*, low-voltage dry-type, medium-voltage dry-type or liquid-immersed), have the same number of phases (*i.e.*, single-phase or three-phase), and, for medium-voltage dry-types, have the same BIL group rating (*i.e.*, 20–45 kV BIL, 46–95 kV BIL or greater than or equal to96 kV BIL).

§ 429.48 Illuminated exit signs.

(a) *Sampling plan for selection of units for testing.* (1) The requirements of § 429.11 are applicable to illuminated exit signs; and

(2) For each basic model of illuminated exit sign selected for testing, a sample of sufficient size shall be randomly selected and tested to ensure that—

(i) Any represented value of input power demand or other measure of energy consumption of a basic model for which consumers would favor lower values shall be greater than or equal to the higher of:

(A)The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the i^{th} sample;

Or,

(B) The upper 95 percent confidence limit (UCL) of the true mean divided by 1.10, where: